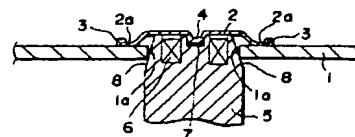


(54) OPTICAL DISK

(11) 5-128775 (A) (43) 25.5.1993 (19) JP
 (21) Appl. No. 3-311544 (22) 31.10.1991
 (71) SONY CORP (72) SATORU WATANABE(2)
 (51) Int. Cl.⁵ G11B23/00

PURPOSE: To provide interchangeability with driving devices of different kinds by centering the optical disk by a central hole provided in its central part or a protruding part provided on a chucking hub.

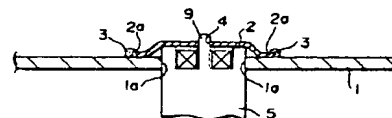
CONSTITUTION: The projection 4 in the central part of the chucking hub 2 provided on a disk table corresponding to the central hole 1a of the optical disk 1 is engaged with a recessed part 7 on the disk table to center the optical disk 1 with high accuracy for the high-performance driving device. The optical disk is centered by engaging an inner peripheral edge of the central part 1a and a tapered part 8 provided on the outer peripheral edge of the disk table 5 for the low-performance driving device. Thus, centering is enabled even with the driving devices of a low rotating speed and a high rotating speed and the interchangeability is assured.

**(54) OPTICAL DISK**

(11) 5-128776 (A) (43) 25.5.1993 (19) JP
 (21) Appl. No. 3-311545 (22) 31.10.1991
 (71) SONY CORP (72) SATORU WATANABE(2)
 (51) Int. Cl.⁵ G11B23/00

PURPOSE: To provide interchangeability with driving devices of different kinds by centering the optical disk by a central hole provided on the optical disk or the centering hole provided in the chucking hub.

CONSTITUTION: The outer peripheral edge 2a of the chucking hub 2 provided in order to chuck the disk to the position corresponding to the central hole 1a of the optical disk 1 is fixed by an adhesive 3 to the optical disk 1. The centering hole 4 of a small diameter is projectingly provided at the center of the chucking hub 2 and is engaged, in the case of high performance, with the centering pin 9 provided on the disk table 5 of the driving device, by which the optical disk is positioned with high accuracy. The optical disk is centered by engaging the inner peripheral edge of the central hole 1a and the tapered part provided on the disk table in the case of low performance. The centering even to the driving devices of a low rotating speed and a high rotating speed is enabled and the interchangeability is assured.

**(54) MAGNETIC DISK DEVICE**

(11) 5-128777 (A) (43) 25.5.1993 (19) JP
 (21) Appl. No. 3-291220 (22) 7.11.1991
 (71) HITACHI LTD (72) TARO SONODA(1)
 (51) Int. Cl.⁵ G11B23/03

PURPOSE: To enhance the rigidity of a revolving shaft and to decrease vibration by setting the number of hubs for mounting and fixing disk-shaped recording media and the contact parts of the shaft at a plurality.

CONSTITUTION: A relief 13 is formed on the outer peripheral surface of the revolving shaft 2 and the hubs 3 are fitted to the revolving shaft 2 in the positions near both ball bearings 8, 9 by two pieces of contact surface 11, 12. Magnetic disks 1 and spacers 5 are alternately stacked on the outer periphery of the hubs 3 and are pressed axially by a clamping plate 4, by which a disk rotating body is constituted. The mass of the disks 1, the spacers 5 and the hubs 3 can be appropriated near to the two ball bearings 8, 9 by adopting such a structure. The hubs themselves contribute to an increase in the bending rigidity of the revolving shaft. The primary resonance point is thus raised and the attenuation of vibration is made possible.

